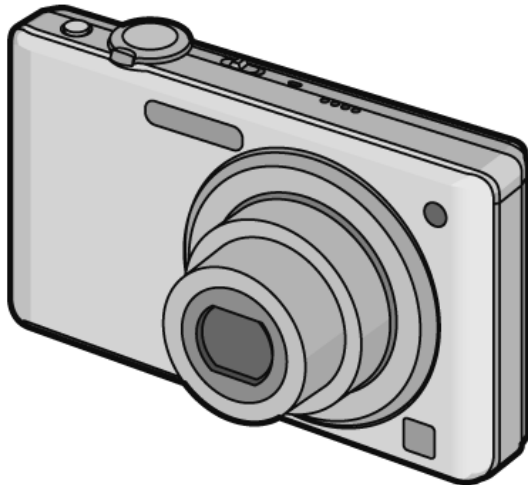


Service Manual

Digital Camera



LUMIX



Model No. **DMC-FS62EB**
DMC-FS62EE
DMC-FS62EF
DMC-FS62EG
DMC-FS62EP
DMC-FS62GC
DMC-FS62GJ
DMC-FS62GN

Vol.1

Colour

- (S)-----Silver Type (except EF)
- (K)-----Black Type
- (P)-----Pink Type (except EF/EE/GN)
- (A)-----Blue Type (except EE/GN)
- (R)-----Red Type (except GC/GJ)

Please use this manual together with the service manual for
Model No.DMC-FS6P/PC/PR/PU/EB/EE/EF/EG/EP/GC/GJ/GK/GN/GT Vol.1 Order No.DSC0902003CE.

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Digital Camera:	Information for your safety
Power Source:	DC 5.1 V
Power Consumption:	1.15 W (When recording) 0.5 W (When playing back)
Camera effective pixels:	10,100,000 pixels
Image sensor:	1/2.5" CCD, total pixel number 10,300,000 pixels, Primary colour filter
Lens:	Optical 4× zoom, f=5.5 mm to 22 mm [35 mm film camera equivalent: 33 mm to 132 mm/F2.8 to F5.9]
Digital zoom:	Max. 4×
Extra optical zoom:	Max. 7.1×
Focus:	Normal/AF macro/Macro zoom/Face detection/9-area-focusing/1-area-focusing
Focus range:	Normal: 50 cm (1.64 feet) to ∞ Macro/Intelligent auto: 5 cm (0.17 feet) (Wide)/50 cm (1.64 feet) (Tele) to ∞ Scene mode: There may be differences in the above settings.
Shutter system:	Electronic shutter+Mechanical shutter
Motion picture recording:	848×480 pixels (30 frames/second, only when using a Card)/ 640×480 pixels (30 frames/second, only when using a Card)/ 320×240 pixels (30 frames/second) * Motion pictures can be recorded continuously for up to 15 minutes. Also, continuous recording exceeding 2 GB is not possible. Remaining time for continuous recording is displayed on the screen.
Burst recording	
Burst speed:	2.3 pictures/second (Normal), Approx. 1.7 pictures/second (Unlimited)
Number of recordable pictures:	Max. 5 pictures (Standard), Max. 3 pictures (Fine), Depends on the remaining capacity of the built-in memory or the card (Unlimited). (Performance in burst recording is only with SD Memory Card/SDHC Memory Card.)
Hi-speed burst	
Burst speed:	Approx. 6 pictures/second (3M (4:3), 2.5M (3:2) or 2M (16:9) is selected as the picture size.)
Number of recordable pictures:	When using the built-in memory: Approx. 10 pictures (immediately after formatting) When using a Card: Max. 100 pictures (differs depending on the type of Card and the recording conditions)
ISO sensitivity:	AUTO/80/100/200/400/800/1600 [HIGH SENS.] mode: 1600 to 6400
Shutter speed:	8 seconds to 1/2000th of a second [STARRY SKY] mode: 15 seconds, 30 seconds, 60 seconds
White balance:	Auto white balance/Daylight/Cloudy/Shade/Incandescent lights/White set
Exposure (AE):	Programme AE Exposure compensation (1/3 EV Step, -2 EV to +2 EV)
Metering mode:	Multiple
LCD monitor:	2.5" TFT LCD (Approx. 230,000 dots) (field of view ratio about 100%)
Flash:	Flash range: [ISO AUTO] Approx. 30 cm (0.99 feet) to 6.3 m (20.7 feet) (Wide) AUTO, AUTO/Red-eye reduction, Forced flash ON (Forced ON/Red-eye reduction), Forced flash OFF (, Slow sync./Red-eye reduction)

Microphone:	Monaural
Speaker:	Monaural
Recording media:	Built-in Memory (Approx. 50 MB)/SD Memory Card/SDHC Memory Card
Picture size	
Still picture:	When the aspect ratio setting is [4:3] 3648×2736 pixels, 3072×2304 pixels, 2560×1920 pixels, 2048×1536 pixels, 1600×1200 pixels, 640×480 pixels When the aspect ratio setting is [3:2] 3648×2432 pixels, 3072×2048 pixels, 2560×1712 pixels, 2048×1360 pixels When the aspect ratio setting is [16:9] 3648×2056 pixels, 3072×1728 pixels, 2560×1440 pixels, 1920×1080 pixels
Motion pictures:	848×480 pixels (Only when using a Card)/ 640×480 pixels (Only when using a Card)/ 320×240 pixels
Quality:	Fine/Standard
Recording file format	
Still Picture:	JPEG (based on "Design rule for Camera File system", based on "Exif 2.21" standard)/DPOF corresponding
Motion pictures:	"QuickTime Motion JPEG" (motion pictures with audio)
Interface	
Digital:	"USB 2.0" (Full Speed) * Data from the PC can not be written to the camera using the USB connection cable.
Analogue video/audio:	NTSC/PAL Composite (Switched by menu), Audio line output (monaural)
Terminal	
[AV OUT/DIGITAL]:	Dedicated jack (8 pin)
Dimensions:	Approx. 97.0 mm (W)×54.4 mm (H)×21.2 mm (D) [Approx. 3 13/16" (W)×2 1/8"(H)×7/8" (D)] (excluding the projecting parts)
Mass:	Approx. 115 g/4.06 oz (excluding card and battery) Approx. 137 g/4.83 oz (with card and battery)
Operating temperature:	0°C to 40°C (32°F to 104°F)
Operating humidity:	10% to 80%
Battery Charger	
(Panasonic DE-A60A):	Information for your safety
Input:	110 V to 240 V~50/60 Hz, 0.2 A
Output:	CHARGE 4.2 V---0.65 A
Battery Pack	
(lithium-ion)	
(Panasonic DMW-BCF10E):	Information for your safety
Voltage/capacity	
(Minimum):	3.6 V/940 mAh

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1 SERVICE NAVIGATION

1.1. INTRODUCTION

This Service Manual contains technical information which will help service personnel to understand and service the Digital Camera Digital Camera; DMC-FS62 series

The Digital Camera DMC-FS62 series have been developed based on DMC-FS6 series.

Since this Service Manual does not cover the same part which is already described in the Service Manual for DMC-FS6 series, when servicing, refer to the descriptions in the Service Manual for ; DMC-FS6P/PC/PR/PU/EB/EE/EF/EG/EP/GC/GJ/GK/GN/GT: Order No. DSC0902003CE (Service Manual Vol. 1).

1.2. Important Notice 1:(Other than U.S.A. and Canadian Market)

When a part replacement is required for repairing MAIN PCB , replace as an assembled parts.

The following category is/are recycle module part. please send it/them to Central Repair Center.

MAIN PCB : VEP56074E

1.3. About the Lens Unit

- The lens unit for this model can be separated into three types; "CP"-Type, "CX"-Type and "YM"-Type.
- The performances/specifications as a "lens unit (W/O CCD)" are the same, but different in individual component part level.
- Therefore, to keep maintain the performances/specifications even after servicing, the part which is only interchangeable part is supplied as a replacement part for lens unit.

Exception: The 1st lens frame unit is supplied as a replacement parts, although it is not interchangeable part.

- When it is necessary to be replaced the component part, which is not listed in the replacement part list, replace the "lens unit (W/O CCD)" as a unit.

(Refer to the Replacement parts list and Exploded views in details.)

Ref No.	Part No.	Part name & Description	Remarks
100	VXW1000	LENS UNIT (W/O CCD)	
101	VDL2317	OPTICAL FILTER	
102	VEK0N42	CCD UNIT	The Component parts are not supplied.
103	VMX3707	CCD CUSHION	
*1 104	VXP3085	1ST LENS FRAME UNIT	For "YM"-Type and "CX"-Type
*1 104	VXP3136	1ST LENS FRAME UNIT	For "CP"-Type
105	L6DA8BEC0003	ZOOM MOTOR	
106	B3NBA0000011	PHOTO SENSOR	
107	B3NBA0000011	PHOTO SENSOR	

*1.About the distinguish method of the 1st lens frame unit, refer to the "3.2.1 When replacing the 1st lens frame unit" in the Service Manual of DMC-FS6 series.

2 INITIAL SETTINGS

After replacing the MAIN PCB, be sure to perform the initial settings after achieving the adjustment by ordering the following procedure in accordance with model suffix of the unit.

1. IMPORTANT NOTICE:

Before proceeding Initial settings, be sure to read the following CAUTIONS.

CAUTION 1:(INITIAL SETTINGS)

---AFTER REPLACING THE MAIN P.C.B. ---

*.The model suffix can be chosen **JUST ONE TIME**.

*.Once one of the model suffix has been chosen, the model suffix lists will not be displayed, thus, it can not be changed.

[NOTE:Only for "EG, EP, EF, EB and EE" models]

*.When one of the "EG, EP, EF, EB and EE" has been chosen, only "EG, EP, EF, EB and EE" are displayed from second times.

CAUTION 2:(Stored picture image data in the unit)

This unit employs "Built-in Memory" for picture image data recording.(Approx.50MB)

After proceeding "INITIAL SETTINGS", the picture image data stored in the unit is erased.

2. PROCEDURES:

• Precautions: Read the above "CAUTION 1" and "CAUTION 2", carefully.

• Preparation:

1. Attach the Battery or AC Adaptor with a DC coupler to the unit.

2. Set the recording mode to the [NORMAL PICTURE] mode.

(Press the [MODE] button and select the [NORMAL PICTURE] by pressing the "[UP] and [DOWN] of Cursor buttons", then press the [MENU/SET] button.)

NOTE:

If the unit is other than [NORMAL PICTURE] mode, it does not display the initial settings menu.

• **Step 1. The temporary cancellation of "INITIAL SETTINGS":**

Set the [REC]/[PLAYBACK] selector switch to "[REC] (Camera mark)".

While keep pressing "[UP] of Cursor button" and [iA] button simultaneously, turn the Power on.

• **Step 2. The cancellation of "INITIAL SETTINGS":**

Set the [REC]/[PLAYBACK] selector switch to "[PLAYBACK]".

Press "[UP] of Cursor button" and [iA] button simultaneously, then turn the Power off.

• **Step 3. Turn the Power on:**

Set the [REC]/[PLAYBACK] selector switch to "[REC] (Camera mark)", and then turn the Power on.

• **Step 4. Display the INITIAL SETTING:**

NOTE:

If the unit is other than [NORMAL PICTURE] mode, it does not display the initial settings menu.

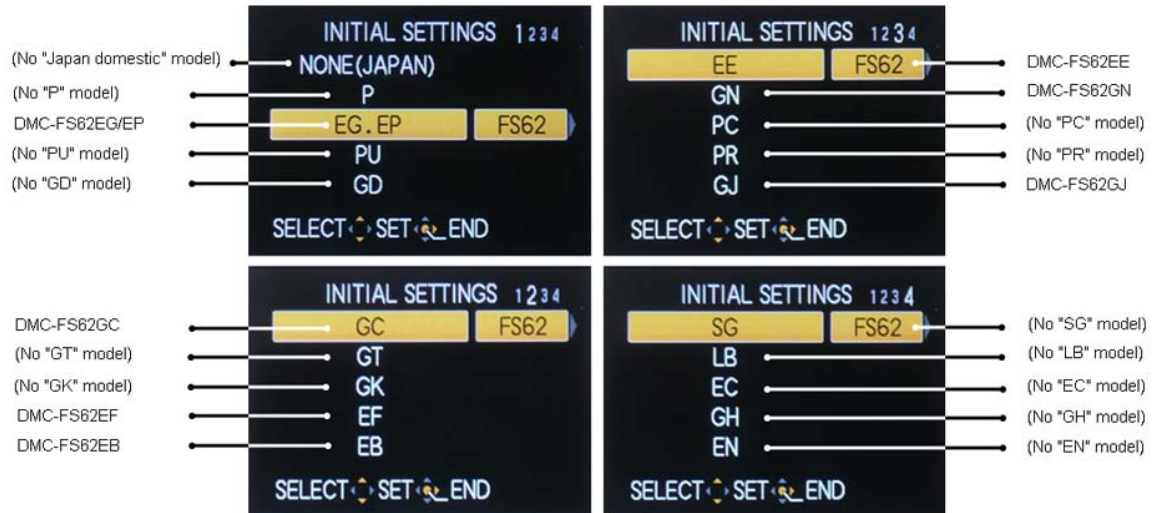
While keep pressing [MENU/SET] and "[RIGHT] of Cursor buttons" simultaneously, turn the Power off.

The "INITIAL SETTINGS" menu is displayed.

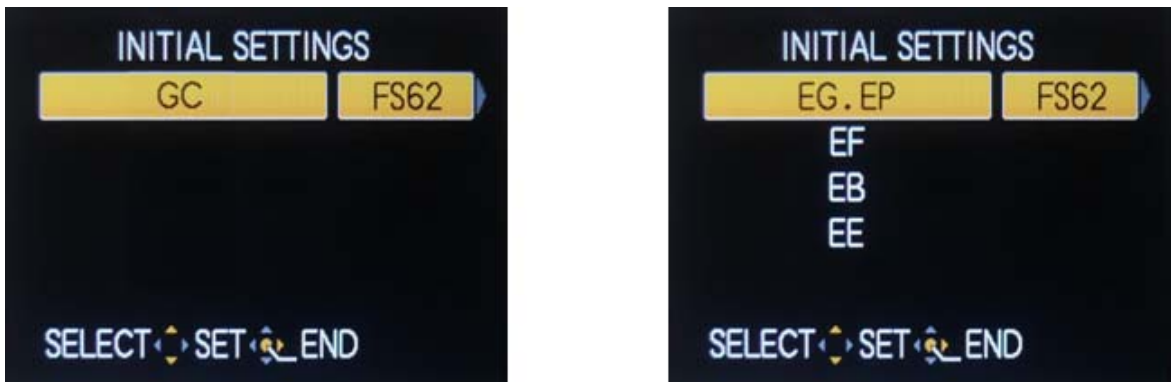
There are two kinds of "INITIAL SETTINGS" menu form as follows:

[CASE 1. After replacing MAIN P.C.B.]

When MAIN P.C.B. has just been replaced, all of the model suffix is displayed as follows. (Four pages in total)



[CASE 2. Other than "After replacing MAIN P.C.B."]



• **Step 5. Chose the model suffix in "INITIAL SETTINGS":** (Refer to "CAUTION 1")

[Caution: After replacing MAIN P.C.B.]

The model suffix can be chosen, **JUST ONE TIME**

Once one of the model suffix have been chosen, the model suffix lists will not be displayed, thus, it can be changed.

Therefore, select the area carefully.

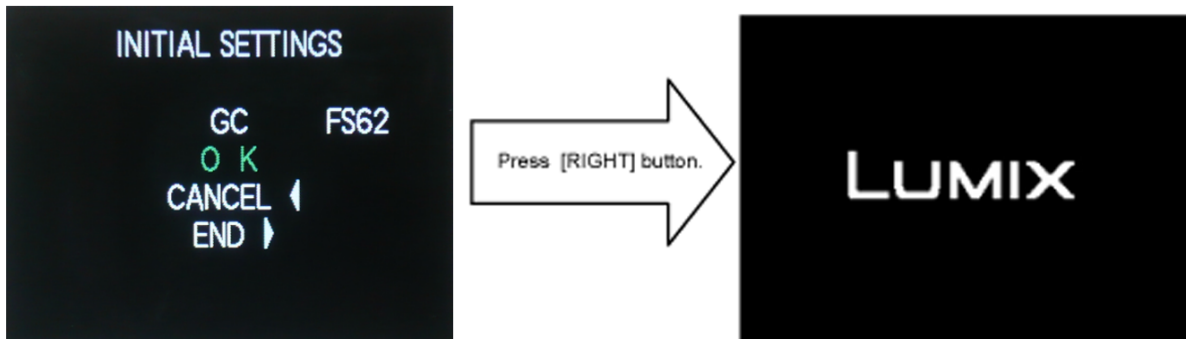
Select the area with pressing "[UP] / [DOWN] of Cursor buttons".

• **Step 6. Set the model suffix in "INITIAL SETTINGS":**

Press the "[RIGHT] of Cursor buttons".

The only set area is displayed, and then press the "[RIGHT] of Cursor buttons" after confirmation.

(The unit is powered off automatically.)



• **Step 7. CONFIRMATION:**

Confirm the display of “PLEASE SET THE CLOCK” in concerned language when the unit is turned on again.
When the unit is connected to PC with USB cable, it is detected as removable media.

1) As for your reference, major default setting condition is as shown in the following table.

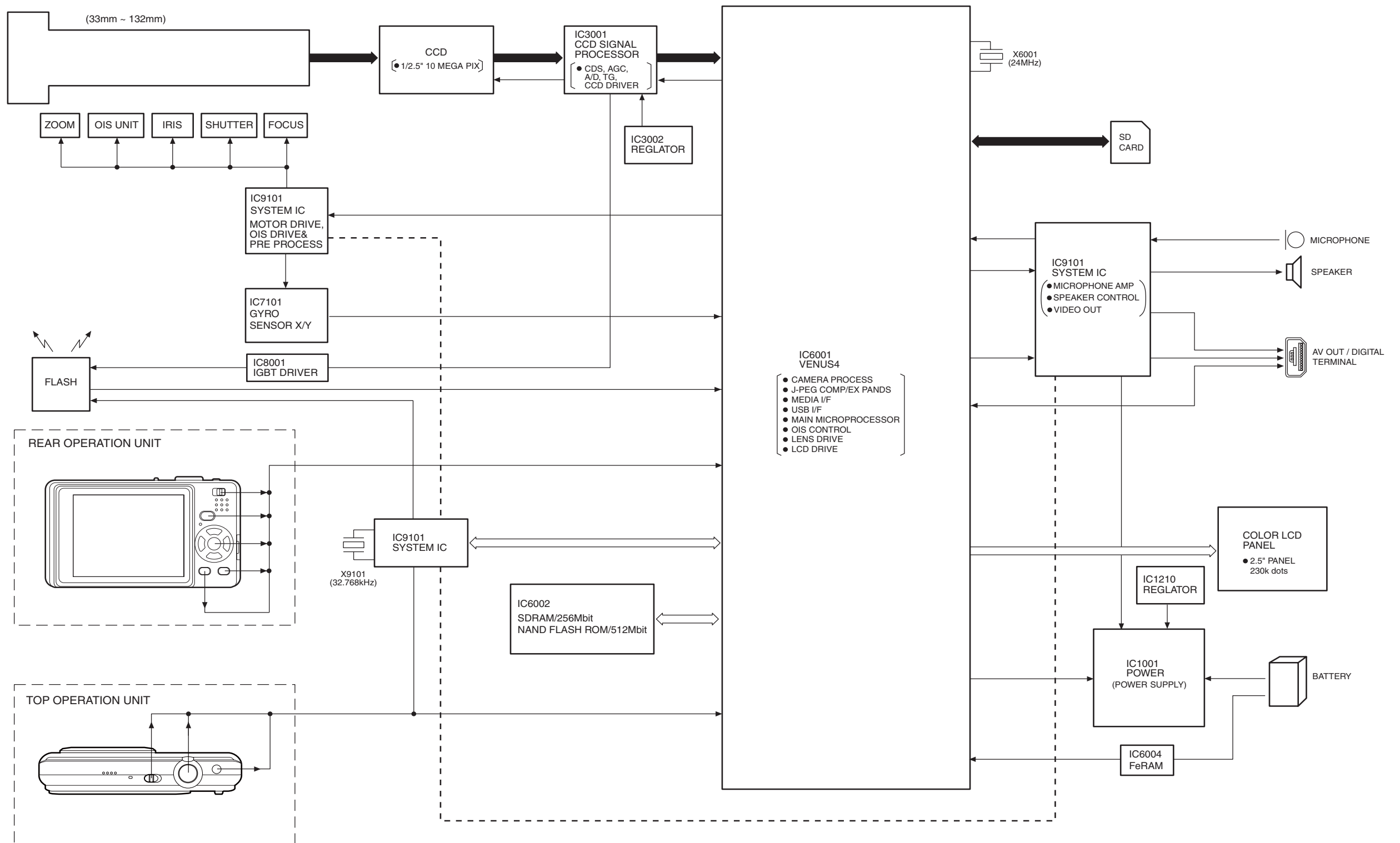
• **Default setting (After “INITIAL SETTINGS”)**

	MODEL	VIDEO OUTPUT	LANGUAGE	DATE	REMARKS
a)	DMC-FS62EG	PAL	English	Date/Month/Year	
b)	DMC-FS62EP	PAL	English	Date/Month/Year	
c)	DMC-FS62EF	PAL	French	Date/Month/Year	
d)	DMC-FS62EB	PAL	English	Date/Month/Year	
e)	DMC-FS62EE	PAL	Russian	Date/Month/Year	
f)	DMC-FS62GC	PAL	English	Date/Month/Year	
g)	DMC-FS62GN	PAL	English	Date/Month/Year	
h)	DMC-FS62GJ	PAL	Thai	Date/Month/Year	

3 DIAGRAMS

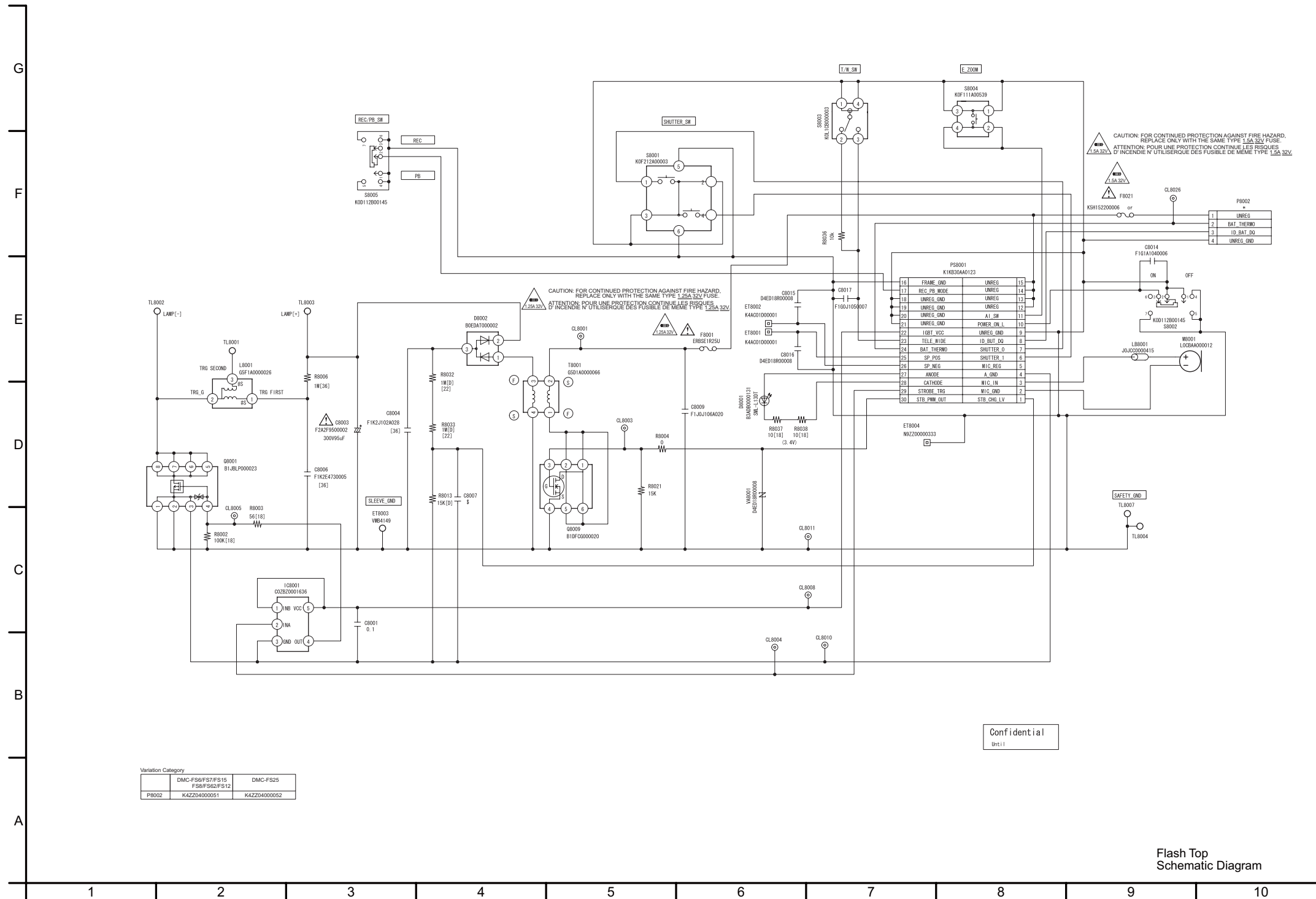
3.1. Overall Block Diagram

◆ OVERALL BLOCK DIAGRAM



OVERALL BLOCK DIAGRAM

3.2. Flash Top Schematic Diagram



4 REPLACEMENT PARTS LIST

- Note:
- * Be sure to make your orders of replacement parts according to this list.
 - IMPORTANT SAFETY NOTICE**
Components identified with the mark \triangle have the special characteristics for safety.
When replacing any of these components, use only the same type.
 - Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
 - The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
 - Supply of CD-ROM, in accordance with license protection, is allowable as replacement parts only for customers who accidentally damaged or lost their own.
 - There are two kinds of the "1st lens frame unit", according to the lens types.
Place order and use the exact type, by referring the distinguish methods instructions described in [1.1.2. Service Caution for Lens unit] in this Service Manual.

E.S.D. standards for Electrostatically Sensitive Devices, refer to PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES section.

Definition of Parts supplier:

- Parts marked with [ENERGY] in the remarks column are supplied from Panasonic Corporation Energy Company.
- Parts marked with [SPC] in the remarks column are supplied from AVC-CSC-SPC. Others are supplied from PAVCSG.

4.1. Frame & Casing Section

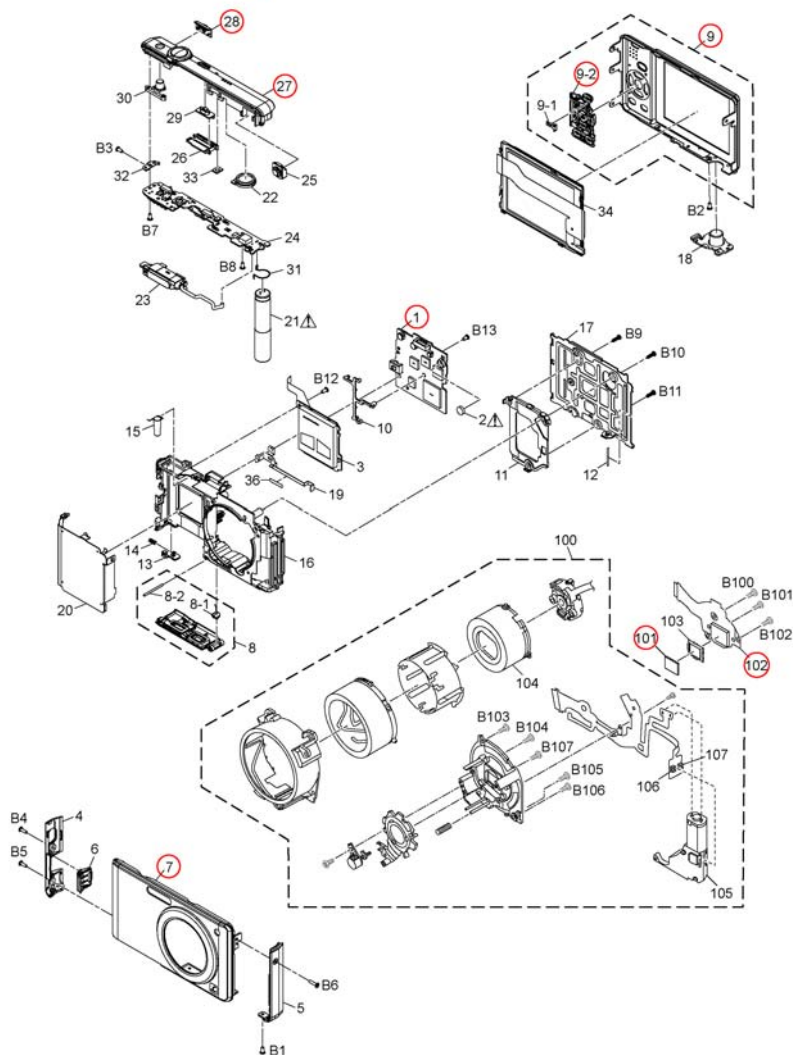
COMPARISON CHART:

The following table shows difference between DMC-FS6 series and DMC-FS62 series.

Ref No.	Original Part No.	New Part No.	Part Name & Description	Pcs	Remarks
	DMC-FS6 series	DMC-FS62 series			
1	VEP56074A	VEP56074E	MAIN P.C.B.	1	(RTL) E.S.D.
7	VYK2Y23	VYK3H78	FRONT CASE UNIT	1	(-S)
7	VYK2Y24	VYK3H79	FRONT CASE UNIT	1	(-K)
7	VYK2Y25	VYK3J50	FRONT CASE UNIT	1	(-A)
7	VYK2Y26	VYK3J48	FRONT CASE UNIT	1	(-P)
7	VYK2Y27	VYK3J52	FRONT CASE UNIT	1	(-R)
9	VYK2Y33	VYK3H82	REAR CASE UNIT	1	(-S)
9	VYK2Y34	VYK3H83	REAR CASE UNIT	1	(-K)
9	VYK2Y35	VYK3J51	REAR CASE UNIT	1	(-A)
9	VYK2Y36	VYK3J49	REAR CASE UNIT	1	(-P)
9	VYK2Y37	VYK3J53	REAR CASE UNIT	1	(-R)
9-2	VGU0D72	VGU0D72	CORSOR BUTTON	1	(-S,-A,-P,-R)
		VGU0E98	CORSOR BUTTON	1	(-K)
27	VYK3H27	VYK3H81	TOP ORNAMENT UNIT	1	
28	VGU0C05	VGU0C05	REC/PLAYBACK SELECTOR KNOB	1	(-S,-A,-P,-R)
		VGU0E99	REC/PLAYBACK SELECTOR KNOB	1	(-K)
101	VDL1956	VDL2317	OPTICAL FILTER	1	[SPC]
102	VEK0N41	VEK0N42	CCD UNIT	1	E.S.D. [SPC]

[FRAME & CASING SECTION]

*The following figure shows the different point between DMC-FS6 series and DMC-FS62 series. The ○ (Ref No with Red circle) mark shows different points.



4.2. Packing & Accessories Section

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	
	300	VPF1302	CAMERA BAG	1	
▲	301	DE-A60AA/SX	BATTERY CHARGER	1	EG,EP,EF,EB,GN
▲	301	DE-A60BB/SX	BATTERY CHARGER	1	EE,GC,GJ
▲	302	-----	BATTERY	1	
	304	K1HA08AD0001	USB CABLE	1	
	305	K1HA08CD0027	AUDIO/VIDEO CABLE	1	GC,GJ
	306	VFC4297-A	HAND STRAP	1	
	307	VFF0484-S	CD-ROM (SOFTWARE)	1	EG,EP,EE,GJ See "Notes" [SPC]
▲	307	VFF0512-S	CD-ROM (SOFTWARE/INSTRUCTION BOOK)	1	EF,EB,GC,GN See "Notes" [SPC]
	308	VGQ0D56	BATTERY PROTECTION CASE	1	
	310	VPF1100	BAG, POLYETHYLENE	1	
	314	VPK3903	PACKING CASE	1	EGS,EPS,EBS,EES,GCS,GJS,GNS
	314	VPK3907	PACKING CASE	1	EGK,EPK,EFK,EBK,EEK,GCK,GJK,GNK
	314	VPK3942	PACKING CASE	1	EGA,EPA,EFA,EBA,GCA,GJA
	314	VPK3943	PACKING CASE	1	EGP,EPP,EBP,GCP,GJP
	314	VPK3944	PACKING CASE	1	EGR,EPR,EFR,EBR,EER,GNR
	315	VPN6663	CUSHION	1	
▲	319	K2CT39A00002	AC CORD W/PLUG	1	EB,GC
▲	320	K2CP2YY00001	AC CORD W/PLUG	1	GJ
▲	320	K2CQ29A00002	AC CORD W/PLUG	1	EG,EP,EF,EE,GC
▲	321	K2CJ29A00002	AC CORD W/PLUG	1	GN
▲	324	VFF0515-C	CD-ROM (INSTRUCTION BOOK)	1	EG,EP
▲	324	VFF0516-C	CD-ROM (INSTRUCTION BOOK)	1	EE
▲	325	VQT2D46	SIMPLIFIED O/I (GERMAN/FRENCH)	1	EG
▲	325	VQT2D50	SIMPLIFIED O/I (SWEDISH/DANISH)	1	EP
▲	325	VQT2D47	SIMPLIFIED O/I (ITALIAN/DUTCH)	1	EG
▲	325	VQT2D52	SIMPLIFIED O/I (POLISH/CZECH)	1	EP
▲	325	VQT2D55	SIMPLIFIED O/I (ENGLISH)	1	EB
▲	325	VQT2D57	SIMPLIFIED O/I (ENGLISH/CHINESE/TRADITIONAL)	1	GC
▲	325	VQT2D62	SIMPLIFIED O/I (ENGLISH)	1	GN
▲	325	VQT2D48	SIMPLIFIED O/I (SPANISH/PORTUGUESE)	1	EG
▲	325	VQT2D54	SIMPLIFIED O/I (HUNGARIAN/FINNISH)	1	EP
▲	325	VQT2D93	SIMPLIFIED O/I (FRENCH)	1	EF
▲	325	VQT2D56	SIMPLIFIED O/I (RUSSIAN/UKRAINIAN)	1	EE
▲	325	VQT2D58	SIMPLIFIED O/I (ARABIC/PERSIAN)	1	GC
▲	325	VQT2D59	INSTRUCTION BOOK (THAI)	1	GJ
	326	VQT2B63	O/I SOFTWARE	1	EG
	326	VQT2B64	O/I SOFTWARE	1	EP
	326	VQT2G20	O/I SOFTWARE	1	GC
	326	VQT2B65	O/I SOFTWARE	1	EF
	326	VQT2B67	O/I SOFTWARE	1	EE
	326	VQT2C95	O/I SOFTWARE	1	GJ
	326	VQT2D89	O/I SOFTWARE	1	EB,GN

Exploded View:

